

5083257



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D6104-009
Job Sheet 179254



Part No: D6104-009

Job Qty: 12 ea

Part Name: Round Billet, 17-4



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 6/15/18

Job Tracking No:

Due Date: 6/29/18

Created By: Chantal Lavoie

Type: Stock

Description:

Note: DWG REV B

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	12 pcs		6/29/18	0.00	0.00	Purchasing		18/06/18
110	Packaging	12 pcs		6/29/18	0.00	0.00	Packaging2		18/06/18
120	QC	12 pcs		6/29/18	0.00	0.00	QC6		18/06/18
130	Packaging	12 pcs		6/29/18	0.00	0.00	Packaging3-2		18/06/18
140	QC21-SA	12 Ea		6/29/18	0.00	0.00	QC21		18/06/18

Part Op 100 - Issue P/O: 40217 b) Ø5.25" x 4.100" long d) Material: 17-4PH Stainless steel e) Material certification
Descriptions: required

110 - Ensure material certification is attached

120 - Ensure Material certification comply to Dwg D6104

130 - LOCATION: MAT043

JUN 15 2018

DAS

13

9-39

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6104-009P	17-4 SS Roundbar 5.25"Od	12 pcs (1 ea)	100-Purchasing	5083251

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D6104-009P	12	0	0

Part Specifications

Specifications could not be found.

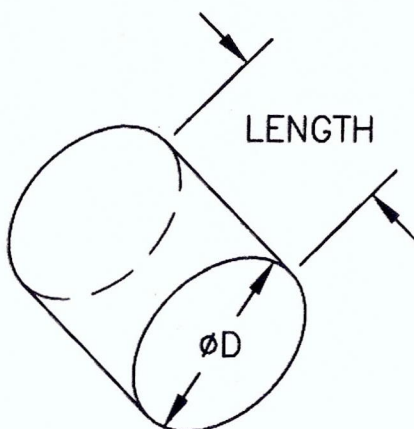
Plex 6/15/18 9:25 AM dart.lavoie.chantal



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D6104	Rev. B SHEET 1 OF 1
DATE 02.11.25		TITLE ROUND BILLET, 17-4	SCALE NTS
A	01.04.10	NEW ISSUE	
B	02.11.25	CLARIFY ALLOY SPEC ADDED D6104-009/-011 REDUCE LENGTH OF BILLETS	

RELEASED
02.11.29 *[Signature]*

SPECIFICATION CONTROL DRAWING



MATERIAL: 17-4 PH SS (AMS 5643) OR AISI 630) MIN UTS = 170 KSI (38 HRc)

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, DIAMETER x LENGTH (+0.030/-0.000) AS SHOWN.

TOLERANCE ON ALL DIMENSIONS IS +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES

Part No.	Alloy	D (Diameter)	Length
D6104-001	17-4 PH STAINLESS STEEL	Ø3.00	3.80
D6104-003	17-4 PH STAINLESS STEEL	Ø3.25	3.80
D6104-005	17-4 PH STAINLESS STEEL	Ø4.00	5.10
D6104-007	17-4 PH STAINLESS STEEL	Ø4.50	5.10
D6104-009	17-4 PH STAINLESS STEEL	Ø5.25	4.10
D6104-011	17-4 PH STAINLESS STEEL	Ø6.50	4.10

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Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO040217**

Supplier: MEC002-VU
Metaux Castle
P.O. Box 4090 Stn A
Toronto
ON
M5W OE9 Canada

PO No: PO040217

PO Date: 6/15/18

Due Date: 6/29/18

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
Phone: clavoie@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

E-MAILED
JUN 15 2018

Items

Line Item	Job	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	179252	D6104-003P		17-4 SS Roundbar 3.25"Od	Firmed	6/29/18	12 pcs	0 pcs	12 pcs	\$26.70/pcs	\$320.40
2	179253	D6104-007P		17-4 SS Roundbar 4.50"Od	Firmed	6/29/18	12 pcs	0 pcs	12 pcs	\$68.53/pcs	\$822.36
3	179254	D6104-009P		17-4 SS Roundbar 5.25"Od	Firmed	6/29/18	12 pcs	0 pcs	12 pcs	\$111.7167/pcs	\$1,340.60
4	179256	D6104-011P		17-4 SS Roundbar 6.50"OD	Firmed	6/29/18	12 pcs	0 pcs	12 pcs	\$128.20/pcs	\$1,538.40
Grand Total:										\$4,021.76	

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)
A026 certification of material conformance
A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 6/15/18 1:08 PM dart.lavoie.chantal

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:3627835

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped 20-JUN-18	F.O.B. ORIGIN	Freight Terms Prepaid		Carrier MANITOULIN		BOL No 3627835-2	

Shipment Details	Final Destination Branch - TOR
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Order No	Line No	Item No	Description				
5175328	4	6004.MO	5.2500.RD.17CR-4NI.STAINLESS.RT.SOL TR.COND A.132.0000-156.0000 CUT TO 4.1 IN (+ .1250/- .0000 IN) - BAND SAW CUTTING SPECIFICATIONS: AMS 5643 ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com				
Purchase Order No		Part Number		Ordered Qty		Invoice Qty	
40217		YOUR ITEM NUMBER: D6104-009		12.00 PCS		12.00 PCS	
Details		ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #'S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS					
Delivery No.	Mill/Source	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty(LBS)
121903282	VALBRUNA CORPORATION			12			310.6061



Castle Metals®

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 2 of 2

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 90 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

JUN 20 2018



Name:

SUE KALOUS

**VALBRUNA**

SLATER STAINLESS, INC.

2400 TAYLOR STREET WEST - PO BOX 630
FORT WAYNE IN 46802 USA
PHONE 260.434.2800 - FAX 260.434.2801**Product Certification Report**Report Number: **5474372**

Certified on Mar 22, 2018 Page 1 of 2

Order I.D. M181702415 0010		Order Date 2/10/18	Commodity Code 6305.25RT	
Dim 1 5.2500	Dim 2 .0000	Heat I.D. 274291	Customer I.D. 0008000033	Customer Purchase Order 39170
Product Shape Round		Product Surface HR & Rough Turned		Customer Grade 630
Length (Inches) .000 Min. .000 Max.		Bill of Lading # PL18000626/1	Weight 001826 LBS	

Ship To
VALBRUNA CANADA LTD
8724 HOLGATE CRECENT
MILTON, L9T5Z1

Sold To
VALBRUNA CANADA LTD
1 ERINVILLE DRIVE
ERIN, ONTARIO, 00000

17-4PH
9/16/22

Lifts: 0048

ASME SA564-13

AISI 630

ASTM A484-16

Condition A

*3174-02 REV 40

EN 10204 3.1

ASTM A564-13e1

ASTMA 370-17

ASTM A564-13e1 TYPE 630

AMS 5643V**CHEMICAL ANALYSIS**

C	Mn	P	S	Si	Cr	Ni	Mo	Cu	N	Cb	Ta	Cb+Ta
.034	.57	.028	.001	.36	15.24	4.52	.26	3.35	.033	.26	.002	.262

BRINELL Type A device E10-15a

HBW

336

ROOM TEMP TENSILE ASTM E8-16a

CAPABILITY

Cap HB	TS (PSI)	.2%YS (PSI)	%EL(4d)	%RA	AGE(F)
431	201000	174700	16.4	54.8	900

MAGNETIC PARTICLE to AMS2303F

FREQ SEV

AVG .00 .00

PRODUCTION HEAT TREATMENT

SOL-ANN (F)	SOL-ANN (HR)	QUENCH
1900	7.50	Air

MACRO ASTM E340-15/E381-01(12)

MACRO

TOP OK

C R S MACRO

BOT 1 1 1 OK

No welding or weld repair done.

Material when shipped is free from contamination by mercury, radium, alpha source, and low melting elements.

Reduction Ratio Exceeds 4:1

Electric Furnace melted; AOD refined.

Material is RoHS compliant.

*Reduction ratio exceeds 4 To 1.

* Ferrite = 0.435%

*Certification revised at Valbruna by T. Landwehr (4/5/18)

Results relate only to the items tested. Certification shall not be reproduced except in full, without written approval of Valbruna Stainless Inc. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes. Including Federal law Title 18, Chapter 47. Consult material safety data sheet (MSDS) for hazard info.

I hereby certify that the reported figures are correct as contained in the records of the corporation.

Manager Laboratory Services

Tad E Landwehr

email: TLandwehr@valbruna.us

Tad Landwehr

**VALBRUNA**SLATER STAINLESS, INC.
2400 TAYLOR STREET WEST - PO BOX 630
FORT WAYNE IN 46802 USA
PHONE 260.434.2800 - FAX 260.434.2801**Product Certification Report****Report Number: 5474372**

Certified on Mar 22, 2018 Page 2 of 2

Order I.D.	Order Date	Commodity Code		
M181702415 0010	2/10/18	6305.25RT		
Dim 1	Dim 2	Heat I.D.	Customer I.D.	Customer Purchase Order
5.2500	.0000	274291	0008000033	39170
Product Shape	Product Surface		Customer Grade	
Round	HR & Rough Turned		630	
Length (Inches)	Bill of Lading #		Weight	
.000 Min.	.000 Max.	PL18000626/1	001826 LBS	

Ship To
VALBRUNA CANADA LTD
8724 HOLGATE CRECENT
MILTON, L9T5Z1

Sold To
VALBRUNA CANADA LTD
1 ERINVILLE DRIVE
ERIN, ONTARIO, 00000

Chemical testing to one or more of the listed ASTM methods:

E1019-11, E1086-14.

Location of tensile fracture: inside middle of gage length. %elong after fracture.

Chemical Analysis performed at Acciaierie Valbruna, Italy.

No mercury or low melting alloy contamination. No weld repair.

Material melted in Italy, manufactured in the United States.

Material conforms to listed specifications. DFARS compliant. Our heat treat furnaces use air atmosphere.

Quality system is compliant with ISO 9001:2015. Produced in accordance with EN 10204 3.1.

Results relate only to the items tested. Certification shall not be reproduced except in full, without written approval of Valbruna Stainless Inc. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes. Including Federal law Title 18, Chapter 47. Consult material safety data sheet (MSDS) for hazard info. I hereby certify that the reported figures are correct as contained in the records of the corporation.

Manager Laboratory Services

email: TLandwehr@valbruna.us

Tad Landwehr

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 06104-009
 DATE: 18/06/22

PO / BATCH NO.: P00402175083257

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 12x
 QUANTITY INSPECTED: 12x
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 5.25"
 THICKNESS RECEIVED: 5.25"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)	COMMENTS
SURFACE DAMAGE	Y ☒	
CORRECT FINISH	☒ N	
CORROSION	Y ☒	
CORRECT GRAIN DIRECTION	☒ N	
CORRECT MATERIAL PER M-DRAWING	☒ N	AMS 5643
CORRECT THICKNESS	☒ N	
PHOTO REQUIRED	Y ☒	
CORRECT REF # TO LINK CERT	☒ N	UT: 274291
CORRECT MATERIAL IDENTIFICATION	☒ N	
CORRECT M# ON THE MATERIAL	☒ N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y ☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y ☒	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT</u> DAS 9 9-89 DATE: <u>18/06/22</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in